Design, Inspection, Repair & Maintenance of Concrete

2027 □□□□□ 16 – 12
Paris (France)



Design, Inspection, Repair & Maintenance of Concrete

Ref: 2022847_216512 Duration: Paris (France) Fees: 5900 GBP

Course Description

This comprehensive 1-week course covers the entire lifecycle of concrete structures, from design to maintenance. Participants will gain in-depth knowledge of concrete properties, structural design principles, inspection techniques, repair strategies, and long-term maintenance practices. The course combines theoretical concepts with practical applications, preparing professionals to effectively manage concrete structures in various environments.

Learning Objectives

- Understand advanced concrete design principles and their application in structural engineering
- Master inspection techniques for identifying and assessing concrete defects and deterioration
- Develop skills in planning and executing effective concrete repair strategies
- Learn best practices for long-term maintenance of concrete structures
- Gain practical experience through case studies and hands-on exercises

Course Modules

Day 1: Concrete Design Principles

- Advanced concrete materials and properties
- Structural design considerations for concrete
- Load calculations and distribution
- Reinforcement design and detailing

Day 2: Inspection Techniques

- Visual inspection methods
- Non-destructive testing techniques
- Structural health monitoring systems
- Defect assessment and documentation

Day 3: Concrete Deterioration and Repair Planning

- Common causes of concrete deterioration
- Corrosion mechanisms and prevention
- Repair material selection
- Repair strategy development



Day 4: Concrete Repair Techniques

- Surface preparation methods
- Crack repair and injection techniques
- Structural strengthening methods
- Quality control in concrete repairs

Day 5: Maintenance Strategies and Asset Management

- Preventive maintenance planning
- Lifecycle cost analysis for concrete structures
- Asset management systems for concrete infrastructure
- Sustainability considerations in concrete maintenance

Practical Wins for Participants

- Ability to design more durable and efficient concrete structures
- Enhanced skills in identifying and assessing concrete defects early
- Competence in planning and executing cost-effective repair strategies
- Improved capacity to develop long-term maintenance plans for concrete assets

